

CLAIMS

1. Process for producing fluorinated
polymers by miniemulsion polymerization in two stages
5 comprising

a) the emulsification of a mixture of
monomers comprising:

from 20 to 99.9% by weight of at least one
monomer chosen from fluorinated (meth)acrylic monomers
10 (A),

from 0.1 to 15% by weight of at least one
monomer chosen from acrylamide and its derivatives,
such as N-methylolacrylamide, and

from 0 to 65% by weight of at least one
15 monomer chosen from nonfluorinated acrylic or vinyl
monomers (B),

using energetic emulsifying means, such as
ultrasound, colloid mill or high-pressure homogenizer,
and

20 b) the polymerization of the said mixture at
a temperature ranging from 20 to 100°C using radical
initiators,

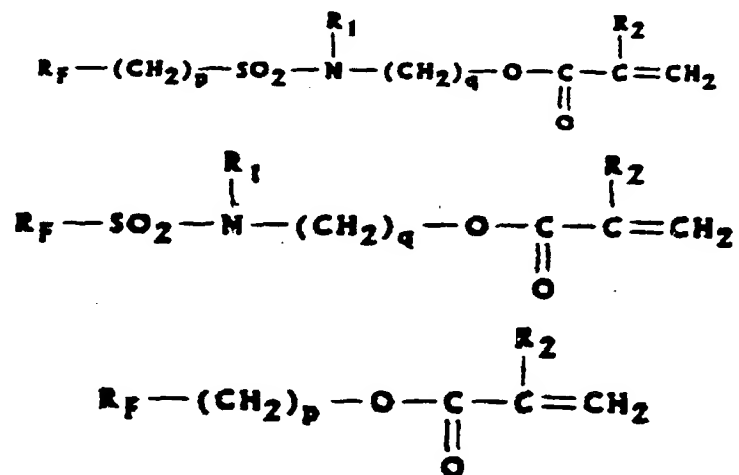
the level of organic cosolvent being less
than 0.2% by weight of the total weight of the
25 emulsion.

2. Process according to Claim 1,
characterized in that the mixture of monomers is

stabilized by at least one surfactant chosen from the group comprising nonionic, anionic or cationic surfactants, such as polyethoxylated sulphasuccinate derivatives or quaternary ammonium derivatives.

- 5 3. Process according to Claim 1 or 2, characterized in that the fluorinated monomer A is chosen from the group comprising the monomers corresponding to the following formulae:

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in which R_F represents a perfluorinated radical with a linear or branched chain comprising 2 to 20 carbon atoms, p and q , which are identical or different, each represent an integer ranging from 1 to 20 and preferably from 1 to 4, R_1 represents a linear or branched alkyl radical comprising from 1 to 4 carbon atoms and R_2 represents a hydrogen atom or a methyl radical.

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4. Process according to one of the preceding claims, characterized in that the monomer B is chosen from the group comprising:

- C₁-C₂₂ alkyl (meth)acrylates
- 5 - (meth)acrylates, the radical of which carries an oxyethylenated linkage
- vinyl monomers, such as vinyl chloride or vinyl acetate
- acrylic and methacrylic acids.

10 5. Process according to one of the preceding claims, characterized in that the initiator is chosen from the group comprising:

- peroxides
- persalts, such as persulphates
- 15 - azo compounds, such as 4,4'-azobis (4-cyanopentanoic acid).

6. Aqueous dispersion of fluorinated polymers as may be obtained according to the process of any one of the preceding claims, the content of organic
20 cosolvent of which is less than 0.2% by weight of the total weight of the emulsion and the level of coagulum being less than 1% by weight of the total weight of monomers.

7. Application of the aqueous dispersion of
25 Claim 6 in the hydrophobic and oleophobic treatment of various substrates, such as leather, textiles, fitted carpets, paper and construction materials.